

DIET OF THE WILD CATTLE OF THE PORTS OF TORTOSA-BESEIT

The aim of this research is to study the diet of a population of wild cattle situated at the Ports of Tortosa-Beseit in order to know if these animals play a role cleaning the forest and shrubland biomass so the flammable landscapes decrease. We will use the method of microhistology analysis of fecal samples of the animals in order to define the botanical composition of their diet.

Cattle are thought to provide biodiversity benefits in woodlands when grazed at low density since they eat vegetation of a low digestibility and break up vegetation mats with their hooves. Because of these perceived benefits there is increasing interest in the use of cattle as a tool for nature conservation management in woodlands (Armstrong et al., 2003).

It is important to know the composition of the cattle's diet because of the risk of wildfire some cattle exploitations were introduced in order to feed with the understory biomass. This biomass, which formerly was consumed by livestock and harvested by people for a variety of purposes, is increasing with the cease of traditional land use practices due to rural abandonment. As land management efforts decrease, fuel biomass builds up and generates flammable landscapes where the risk of fire spread is high (Torres, 2014).

MATERIALS AND METHODS

In order to estimate the diet composition, 5 fecal samples of different animals were collected for 3 months: June, July and August. 5 microscopic preparations were made of every sample, so at the end, we had 45 microscopic preparations. The method we used was the microhistological analysis which provides acid digestion and allows recognizing the most characteristic parts of the vegetable fragments such as epidermal cells, trichomes and stomas but it is important to know that is not a 100% reliable method.

Our livestock is situated at the north of the Natural Park as we can see at the figure 1 and spans an area of 228,8 ha.

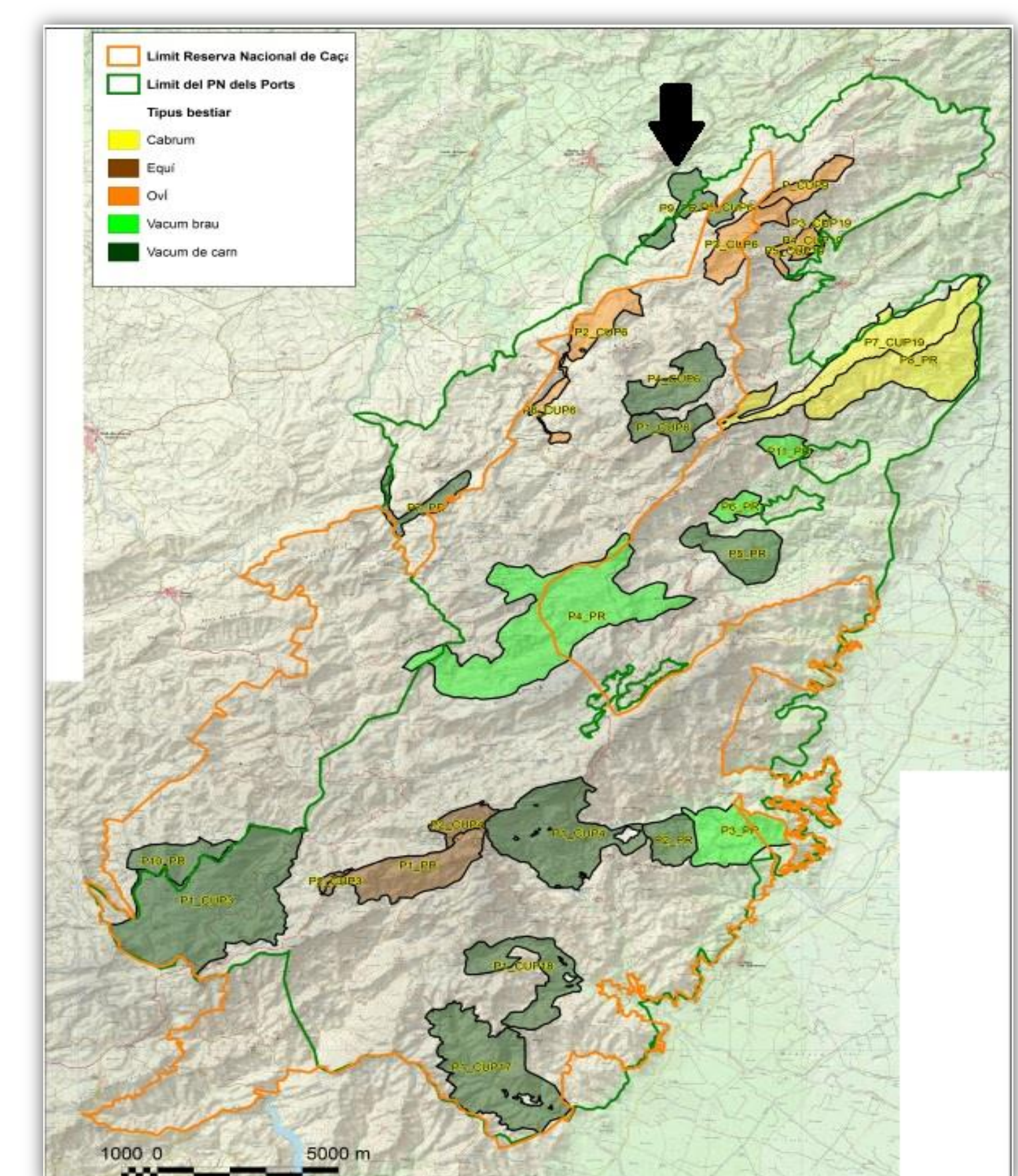


Figure 1. Map of the livestock exploitations of the Natural Park.

RESULTS

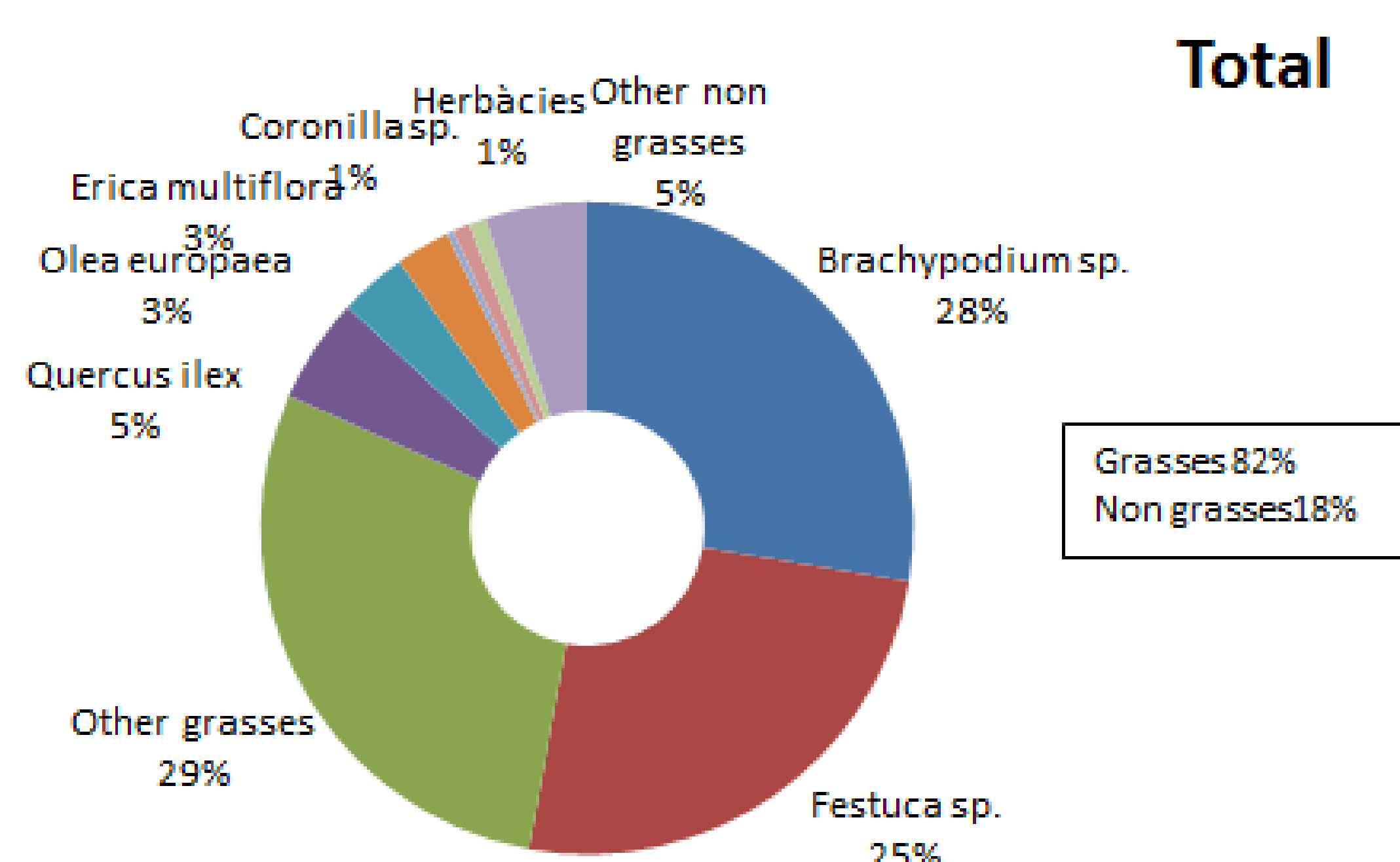


Figure 2. Graphical representation of the results obtained during the 3 studied months.

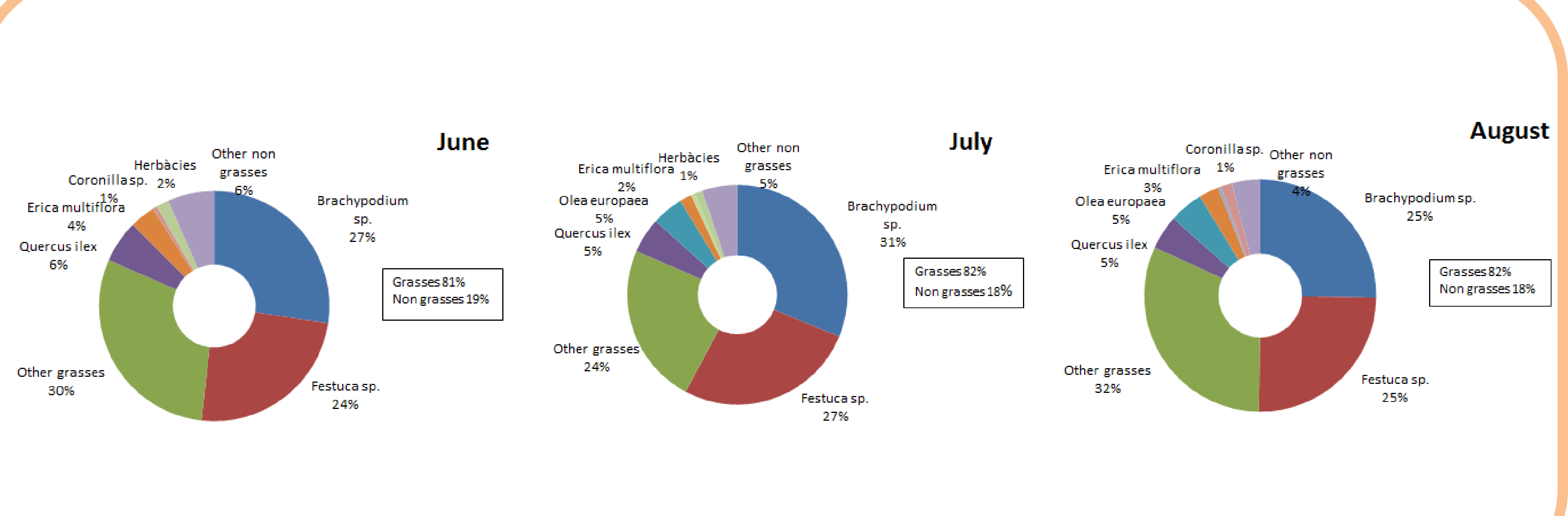


Figure 3. Graphical representation of the results obtained in each month: June, July and August.

DISCUSSION AND CONCLUSIONS

As we can see in the results, there is a clear predominance of the grasses species in the diet of these ruminants with an 81% and the other 19% by no grasses species.

This composition, basically by grasses, is very important for the habitat because cattle provide some benefits as reducing flammable species, reducing the existing scrub layer and maintaining open habitats.

For all this reasons, we conclude that the cattle, as a large ruminant, is useful to reduce the more easily combustible biomass at the Natural Park of the Ports of Tortosa-Beseit, therefore, it has a preventive effect in the risk of wildfire initiation during the hottest months of the year.

REFERENCES

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